

REMARKS

Comments of the applicant are preceded by related comments of the examiner.

21. Applicant also argues that the secondary reference Rariden only teaches causal relationship as a "relative sequential position of a trap in a series of traps." In response to Applicant's argument, Applicant is guided to column 2, lines 58-67 and column 3, lines 9-35 of Rariden. In these passage, Rariden teaches that the node which sends the traps sends the current node's object status which contains initialization information about any current equipment error or any interface association error related to the respective high speed switch. In this portion of the reference, Rariden teaches that the node sends a trap and with the trap is information about why the trap was sent and if the trap was sent because of its relationship with a High Speed Switch. This teaches that the node in Rariden sends traps that describe faults occurring in a network and cause or are caused by faults of at least some of the other network entities. (page 10, paragraph 8 of the action).

The examiner appears to take the position that Rariden teaches "causal relationships" in that each high speed switch has a "relationship" with an agent that is configured to emit a trap message that contains event change information memorializing errors that have occurred at the switch.

Claim 1 has been amended to recite "processing information to identify network faults that cause or are caused by other network faults and that contribute to a failure of a network element in which at least some of the network faults are occurring..."

Rariden does not disclose or would not have made obvious this feature of amended claim 1. In Rariden, there is no suggestion that an error at a switch causes or is caused by another error at the switch. What Rariden says about errors that occur at or in relation to the switch is this:

Initially, the fault status agent 52 (FIG. 2) of the network management system 12 initially polls the high speed switches (HSS nodes) 18, 20, 22, 24 for a current trap number and a current node's objects status. In response thereto, each SNMP/File transfer protocol agent sub-system 62 (FIG. 3) of a respective high speed switch 18, 20, 22, 24 emits a sequence of response messages having the current trap number and the current node's objects status, which contains initialization information about any current equipment error or any interface association error related to the respective high speed switch (HSS nodes) 18, 20, 22, 24. The fault status agent 52 (FIG. 2) stores a respective current node's objects status for each respective high speed switch (HSS nodes) 18, 20, 22, 24. This initializes the communication protocol between the fault status agent 52 (FIG. 2)

and each SNMP/File transfer protocol agent sub-system 62 (FIG. 3) of the respective high speed switch 18, 20, 22, 24.

From time-to-time thereafter, events will change with respect to *equipment error or interface association error (i.e. a communication protocol problem)* of the respective high speed switch (HSS nodes) 18, 20, 22, 24. When events change in the respective high speed switch 18, 20, 22, 24, each SNMP/File transfer protocol agent sub-system 62 (FIG. 3) will emit a respective event change trap message having an updated respective current trap number and an updated respective node's objects status, which contains information about the change in *events of the equipment error or interface association error* related to the respective high speed switch (HSS nodes) 18, 20, 22, 24. Each SNMP/File transfer protocol agent sub-system 62 (FIG. 3) will increment its respective current node trap number by one each time a respective event change trap message is sent.

The cited passage does not disclose that an error of the switch (interface association error or equipment error) causes or is caused by another error of the switch (interface association error or equipment error). The cited passage fails to disclose "processing information to identify network faults that cause or are caused by other network faults and that contribute to a failure of a network element in which at least some of the network faults are occurring..." as recited in claim 1.

Claim 10 recites an apparatus that includes "a network element having network entities that are subject to network faults, wherein the network faults of at least some of the network entities cause or are caused by network faults of at least some others of the network entities, and a medium bearing information capable of configuring a machine in the network element to identify network faults that cause or are caused by other network faults, generate traps with respect to fewer than all of the network faults that are occurring at the network entities, and send the traps to a network management station."

Claim 10 is patentable over Rangaraian and Rariden for reasons corresponding to those given above with respect to claim 1.

Claim 11 recites a medium bearing "information capable of configuring a machine to determine whether network faults cause or are caused by other network faults occurring in entities of a network element."

Claim 11 and its dependent claims are patentable over Rangaraian and Rariden for reasons corresponding to those given above with respect to claim 1.

Claim 13 recites a method that includes “using a directed acyclic graph that models causal relationships between network fault objects to process information about network faults that contribute to a failure of a network element in which at least some of the network faults are occurring, based on the results of the information processing, generating traps with respect to root cause network faults and not with respect to at least some cascading network faults triggered by root cause network faults, and sending the traps to a network management station.”

The examiner alleges that Rangaraian teaches a “directed acyclic graph” at col. 6, lines 14-33. However, this cited portion of Rangaraian merely discloses that a visual notification of outstanding traps may be provided:

The Console procedure 66 includes a Display procedure 74 that provides additional visual notification as to whether any traps 60 are outstanding. The Display procedure 74 displays *views of the devices in a hierarchy*, and it allows the network administrator to navigate through various levels of the hierarchy. The Display procedure 74 represents the devices 12-38 with glyphs 75. Glyphs 75 are icons that have attributes such as color and brightness. ***The glyphs 75 are color-coded to notify the network administrator of traps that are outstanding.*** For example, a yellow color could indicate that a LOW priority trap is outstanding; an orange color could indicate a MEDIUM priority trap; and a red color could indicate a HIGH priority trap. The colors are displayed in an order of precedence: the highest priority trap color takes precedence. If a device has generated both a HIGH priority trap and a MEDIUM priority trap, its glyph 75 will display only the color (i.e., red) used to indicate HIGH priority. A glyph 75 could be colored green to indicate that no traps for its corresponding device are outstanding.

The applicant submits that Rangaraian does not disclose a “directed acyclic graph,” much less one that “models causal relationships between network fault objects,” as recited in amended claim 13.

For at least these reasons, claim 12 and its dependent claims are patentable over Rangaraian.

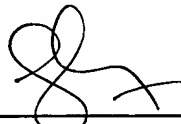
It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or

concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Enclosed is a \$60.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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Mandy Jubang
Reg. No. 45,884

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906